

PRO_DEV-DEEP-Ground Truthing the AI Bubble.ARCHIVE

Session ▾

- **Lecture:** Imler, Henry. "Ground Truthing the AI Bubble." Faculty Professional Development Session, Spring 2025.
- **Prep and Presentation**
 - Handout - [HANDOUT-PROF-DEV-Ground-Truthing-AI- Critical Thinking About Technology Hype](#)
 - Canvas: [PROF_DEV-Ground Truthing the AI Bubble-CANVAS.archive.25FA.canvas](#)
- **LCARS Notes**
 - Written Version: [EXTRACT-PROF_DEV-IMLER-Ground Truthing the AI Bubble.25FA.archive](#)
 - Notes - [PRO_DEV-IMLER-Ground Truthing the AI Bubble-NOTES.ARCHIVE](#)

Ground-Truthing the ANI Bubble ▾

What does the AI bubble have to do with the Giza Megastructure hoax from last semester? More than just the use of machine-generated text and images and marketing. Professor Imler will propose we borrow archaeology's notion of "ground truthing" (visiting sites to confirm satellite data) to help us sort through this question in our classes. Just as the technology used in the hoax (Synthetic Aperture Radar) has its place, perhaps AI is also a "sometimes tool." We will end by asking each other what post-hype artificial narrow intelligence (ANI) might look like and how we might discuss it at the college in ways that serve our region.

Bibliography

Introductory Fictions

- Asimov, Isaac. "All the Troubles of the World." In *Nine Tomorrows*. New York: Doubleday, 1959.
- *2025 Giza Harmonic Pillar Hoax* - Project Khafre, Corrado Malanga, Armando Mei, and Filippo Biondi. "Giza: The Pyramids and the Temporal Gateway (Official Press Release)."

Press Release. Castel San Pietro Terme, BO, Italy, 2025.

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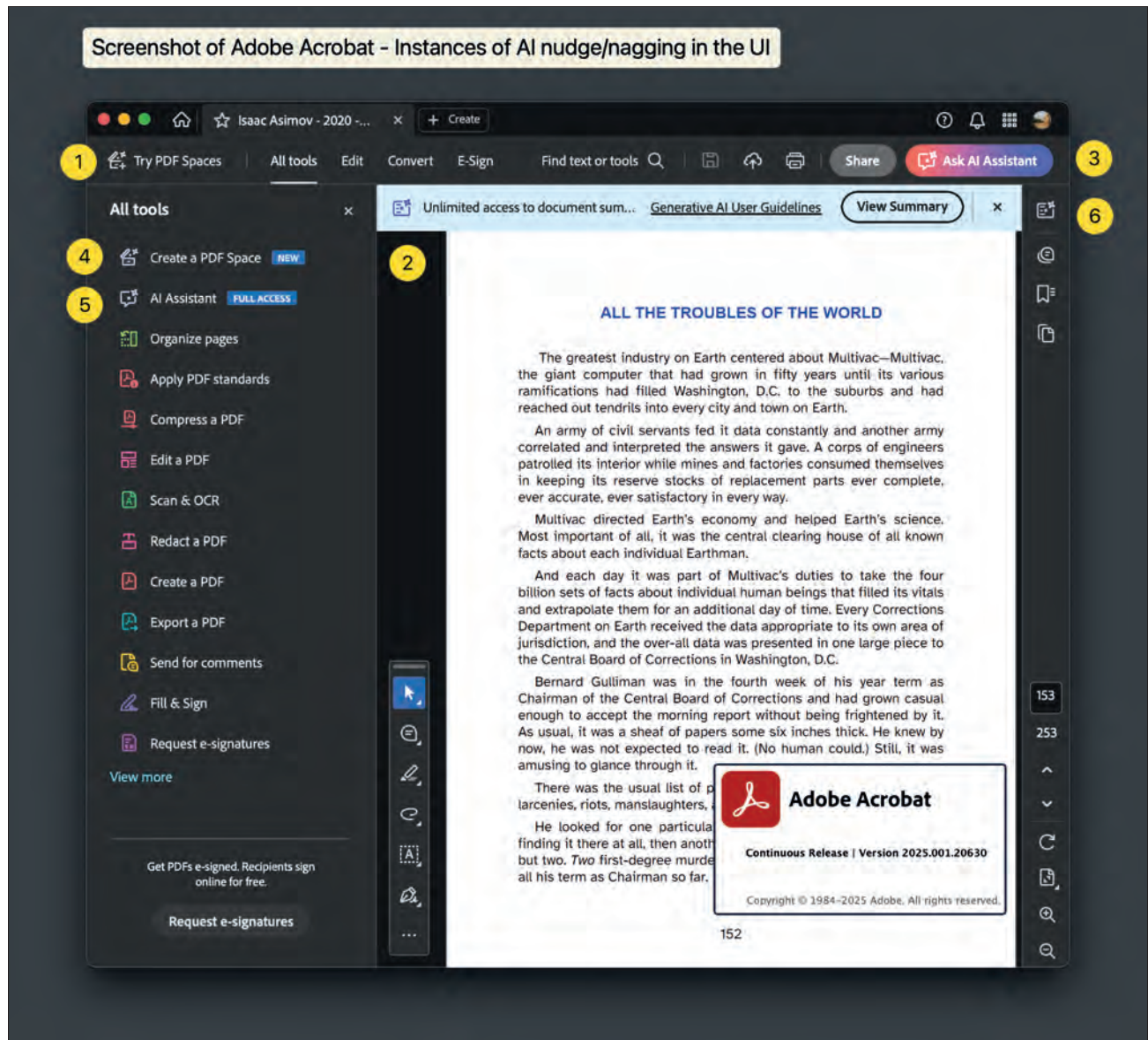
Core Readings

1. Zitron, Ed. "The Hater's Guide To The AI Bubble." *Ed Zitron's Where's Your Ed At*, July 21, 2025. <https://www.wheresyoured.at/the-haters-gui/>.
2. Edwards, Benj. "Why ChatGPT and Bing Chat Are so Good at Making Things Up." *Ars Technica*, April 6, 2023. <https://arstechnica.com/information-technology/2023/04/why-ai-chatbots-are-the-ultimate-bs-machines-and-how-people-hope-to-fix-them/>.
3. Stanford HAI. "AI on Trial: Legal Models Hallucinate in 1 out of 6 (or More) Benchmarking Queries." July 26, 2025. <https://hai.stanford.edu/news/ai-trial-legal-models-hallucinate-1-out-6-or-more-benchmarking-queries>.
4. Parcak, Sarah. "Satellite Remote Sensing for Archaeology with Dr Sarah Parcak and Debunking the Pyramid Fake Claims." Interview by Flint Dibble. April 3, 2025. YouTube. <https://www.youtube.com/watch?v=lyhdmj6WGX8>.

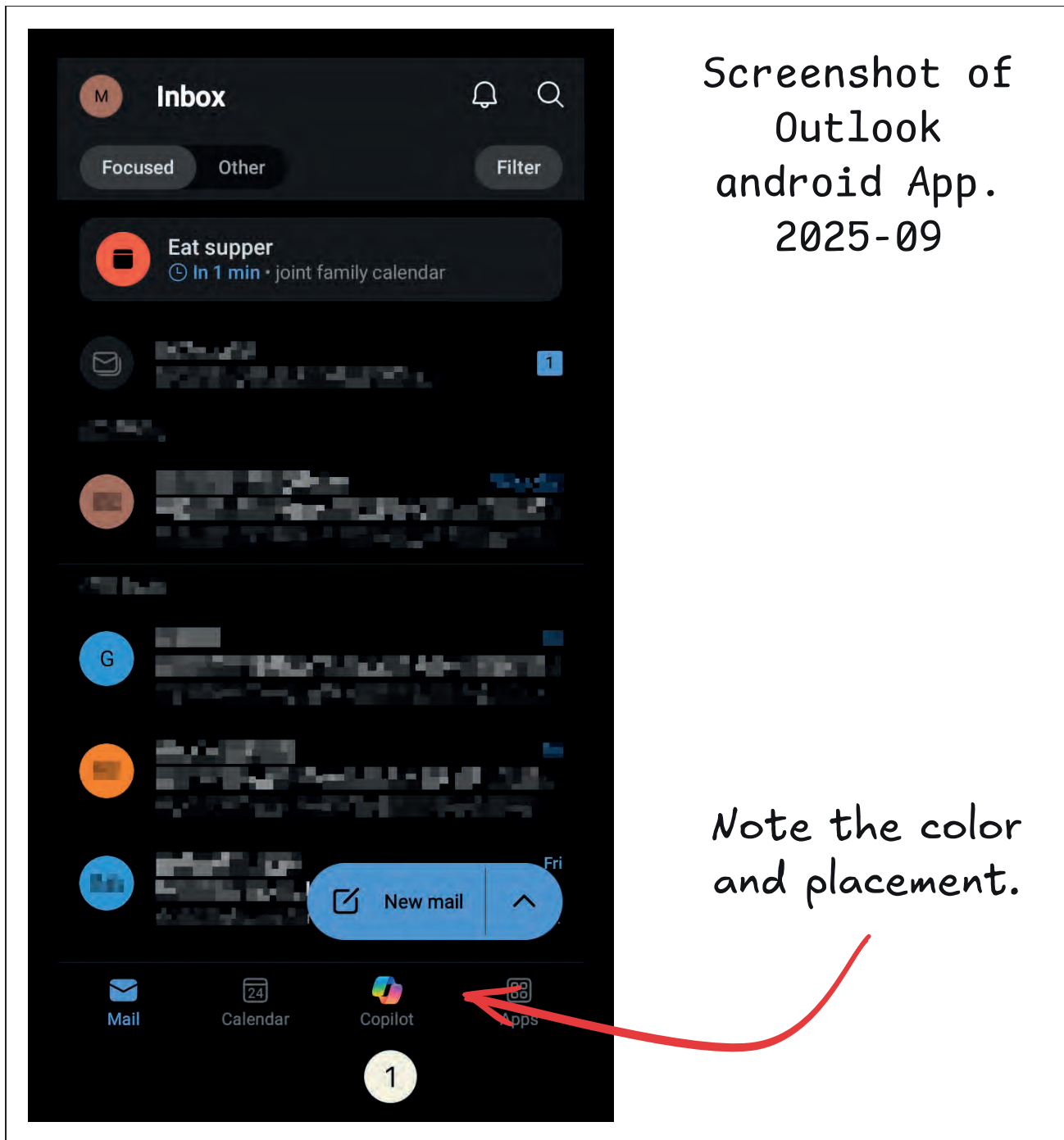
Full bibliography: Fools for Backwards Design Zotero Group, Ground Truthing AI Collection: <https://www.zotero.org/groups/6084929/foolsforbackwardsdesign/collections/L8ZNAIVZ>

Outline of Lecture and Discussion

1. Opening Hook: Market Desperation Signals



1. Adobe's revenue panic revealed through design choices
1. Interface redesign placing gray elements except bright "AI" buttons
2. Direct quote: "Please use AI. Please it'll cost you a little bit more, but please, we need some rents"
3. Poor user experience design prioritizing AI promotion over functionality
2. Microsoft's Copilot integration as symptom of industry-wide anxiety



1. Outlook app redesign forcing bright Copilot button placement

2. *Technology insertion regardless of user needs or workflow improvement*

3. Pattern recognition: companies exhibiting desperation rather than confidence

1. Analogy: "If you have friends who keep texting you before you can text them back, do they sound confident?"

2. Universal "inevitability" messaging without demonstrated utility

3. Question posed: Are we seeing sustainable innovation or speculative fragility?

2. **Mythological Framework: Universal Machine Anxieties Through Science Fiction**

1. Isaac Asimov's Multivac as predictive cultural artifact

1. Computer system description: "had grown in 50 years until its various ramifications had filled Washington, D.C."
2. Function: "directed the Earth's economy and helps the Earth's science...clearing house of all known facts about each individual Earthman"
3. Societal relationship: asked to "absorb all of our evil to guard against it"

2. Contemporary parallels in AI marketing and deployment

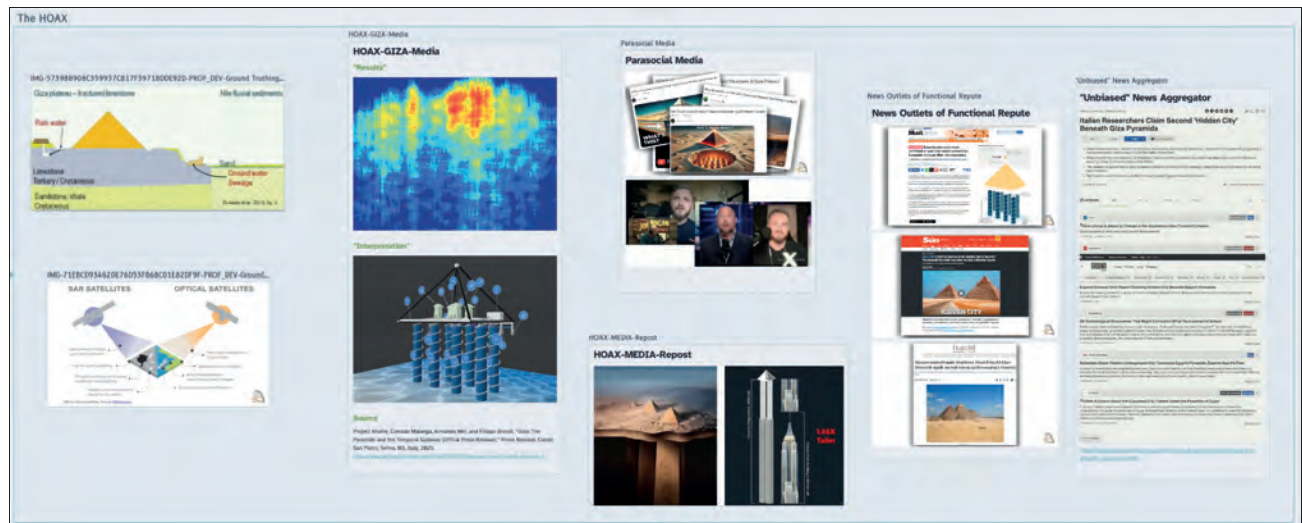
1. Similar promises of universal problem-solving capabilities
2. Offloading difficult moral and social decisions to algorithmic systems
3. Public willingness to surrender agency to technological solutions

3. The burden of omniscience: Multivac's final request

1. When asked what it wants most: "I want to die"
2. Implications: impossible burden of solving all human problems
3. Critical question: Are the tasks we're automating inherently problematic for any intelligence?

3. Case Study Introduction: The Giza Pyramid Hoax as Pattern Template

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1. Anatomy of scientific fraud in the digital age

1. Initial publication of method in predatory journal¹ bypassing legitimate peer review
2. Use of legitimate technology (SAR imaging) applied inappropriately, packaged as legitimate
3. Black box AI processing preventing independent verification or replication
4. Promise of "forthcoming research" during press conferences to seed the story with an air of legitimacy

2. Visual persuasion through professional presentation

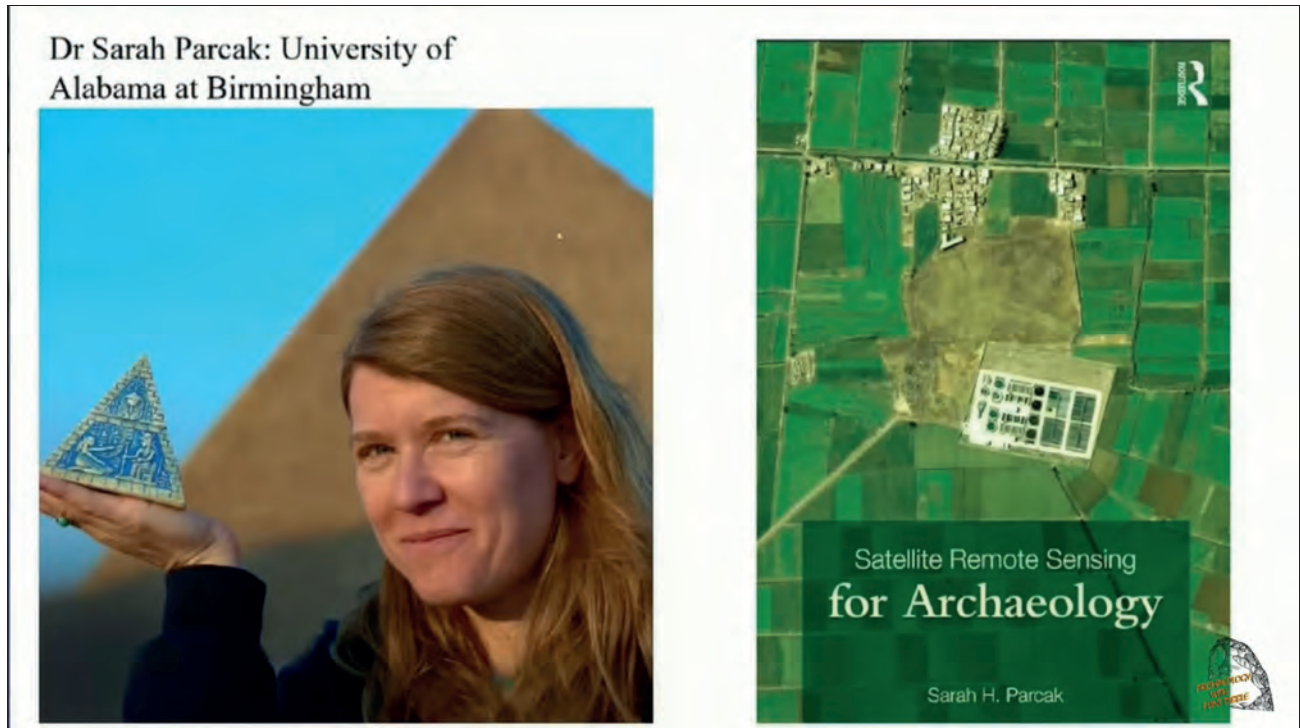
1. Transformation from legitimate satellite data to black-box software processing to speculative interpretation to compelling CAD drawings
2. Images showing "clear structures" and underground spiral staircases
3. Professional graphics masking fundamental methodological problems, giving an air of

legitimacy

3. Viral amplification through multiple media ecosystems

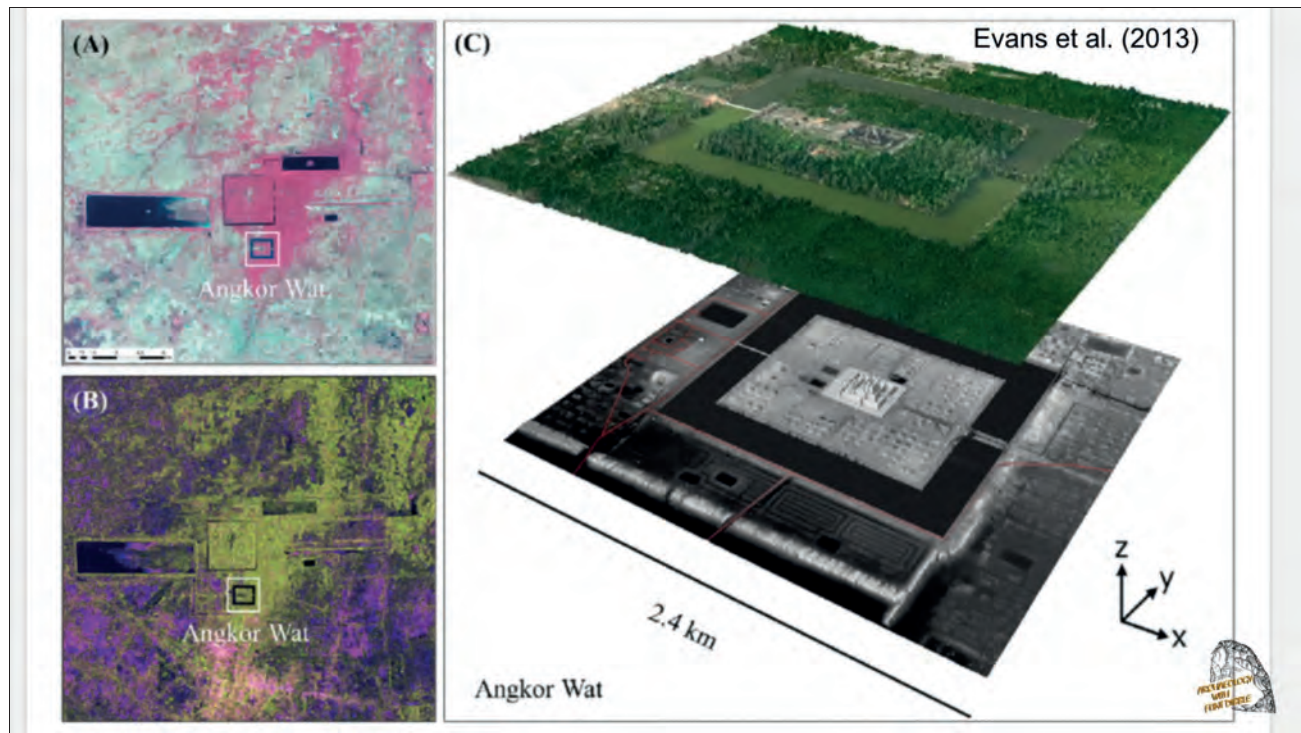
1. Conspiracy theory podcasts → Joe Rogan platform → news aggregation → mainstream sources
2. Parasocial media relationships² spreading claims faster than verification
3. Participant contribution - Language analysis: reliable sources use "claim/propose" while unreliable sources use "discovered/found"

4. Ground Truthing Methodology: Archaeological Rigor Applied to Technology Claims



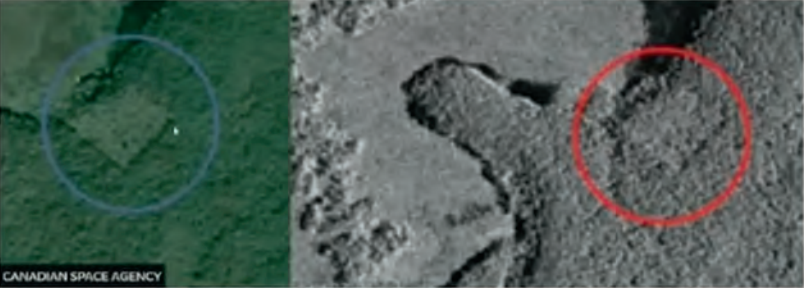
1. Dr. Sarah Parcak's definition and approach

1. Core principle: "Compare with the thing that you know works"
2. Essential requirement: field verification of remote sensing data
2. Participant Example: blood pressure measurement using proven pressure cuff versus theoretical new method
3. SAR Imaging - Real archaeological success: legitimate satellite discoveries
 1. Amazon civilizations found through systematic methodology
 2. Technology capabilities: satellites penetrating vegetation, detecting features 2 meters underground
3. Revolutionary discoveries made possible through proper scientific method



4. The cannabis farm lesson: why verification matters

1. Satellite data indicated ancient settlement in remote jungle location
2. Ground truth expedition revealed modern marijuana cultivation operation
3. Demonstration that even sophisticated technology requires human interpretation and field confirmation



Satellite images of the site suggest some form of human intervention on the ground

By BBC Trending
What's popular and why

Is it a lost Mayan city or a crop of cannabis?

Earlier this week BBC Trending, and other media outlets, reported on the story of William Gadoury, a remarkable teenager from Canada who, along with the Canadian Space Agency and the University of New Brunswick, claimed to have discovered evidence of the existence of an ancient Mayan city hidden in the jungles of Mexico. But now some experts have disputed those claims.

William, 15, from Quebec theorised that the locations of Mayan cities might correspond to stars in Mayan constellations. By overlaying Mayan star maps from ancient books onto Google Earth images of the Yucatan Peninsula, he concluded that 117 Mayan cities matched the star positions. After finding a discrepancy at a certain location in the Mexican jungle, he was provided with radar images by the Canadian Space Agency, and asked a Remote Sensing

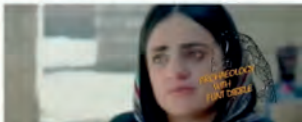
More to explore



The man with a mind-reading chip in his brain - thanks to Elon Musk



'Reeves wields axe on Civil Service' and 'boxing says bye George'



5. Methodological Transfer: Applying Archaeological Standards to AI Evaluation

1. Participant contributions:

1. Pattern recognition between pyramid hoax and AI hype

1. Both use unverifiable claims due to proprietary black box systems

2. Both bypass traditional scientific verification through press conferences and marketing

3. Both employ "one doorway away" messaging - perpetual promises of imminent breakthrough

2. Economic ground truthing: examining financial sustainability

1. OpenAI business model: spending \$2.25 for every \$1.00 earned (Zitron analysis)

2. Computational costs trending upward rather than downward over time (Ars collection)

3. Infrastructure reality: "data centers are short-lived, asset intense" requiring constant hardware replacement

3. Material constraints versus marketing promises

1. Participant contributions

Energy consumption: Silicon Valley using more electricity than it produces

1. Water usage crisis: Utah implementing housing watering restrictions due to data center cooling demands

2. Physical impossibility of scaling current business models profitably

6. Ground Truth Analysis: The Economics and Physics of AI Hype

1. Business model sustainability crisis across the industry

1. No major generative AI companies achieving profitability despite massive investment

2. Venture capital funding masking operational losses in classic bubble pattern

3. Cost structure: every text generation, image creation, and query loses money

2. Technical capability versus marketing claims

1. ANI³ reality: "super-sophisticated pattern matching" rather than genuine intelligence

2. AGI⁴ promises: "something like Commander Data on Star Trek" - currently non-existent

3. Failure rates: autonomous agents failing "90% of the time" in real-world applications

3. Infrastructure and environmental costs ignored in promotional materials

1. Data centers requiring massive cooling systems and frequent hardware replacement

2. Energy grid impact: additional 3% annual growth requirement on finite planet resources

3. Surveillance applications with high "hallucination tolerance"⁵ raising accuracy concerns

7. Educational Strategy: Preparing for Post-Bubble Reality

1. Anticipating structural market adjustment

1. Bubble indicators: investment patterns matching dot-com speculation
 2. Inevitable correction: transition from universal promises to narrow, verified applications
 3. Survival prediction: domain-specific models and genuine productivity tools will remain
2. Student preparation for technology literacy
 1. Critical evaluation skills: "always ask for evidence and where that evidence came from"
 2. Material understanding: teaching actual computational costs and energy requirements
 3. Agency preservation: maintaining human decision-making capacity while using beneficial tools selectively
3. Institutional response framework
 1. Neither technophobic rejection nor technophilic embrace
 2. Evidence-based evaluation: applying ground truthing methodology to technology decisions
 3. Educational mission focus: serving student learning rather than following market-driven adoption pressures
4. Post-correction curriculum development
 1. "Sometimes tools" approach: selective use based on demonstrated utility
 2. Emphasis on human creativity and critical thinking skills
 3. Preparation for realistic technology landscape after speculative investment withdrawal

Glossary

Term	Lecture Use
Ground Truthing	Archaeological method of comparing satellite claims against known reliable field verification, applied to evaluate AI technology promises
Black Box Systems	AI processing systems that cannot be audited, examined, or independently verified, preventing evaluation of accuracy or methodology
ANI (Artificial Narrow Intelligence)	Current AI systems that perform "super-sophisticated pattern matching" within specific, limited domains
AGI (Artificial General Intelligence)	Hypothetical future AI "like Commander Data on Star Trek" with human-level abilities across all cognitive domains

Term	Lecture Use
Parasocial Media	One-way relationships between audiences and media personalities that facilitate rapid spread of unverified information
Blue Ocean Strategy	Marketing approach claiming universal technology adoption necessity regardless of demonstrated utility
Hallucination Tolerance	Acceptance of AI system errors and false outputs in high-stakes applications like surveillance and monitoring
Cheap Text	AI-generated writing requiring zero human thought or learning, undermining educational processes
Structural Market Adjustment	Economic correction when speculative investment patterns become unsustainable and require fundamental reorganization

Footnotes:

¹ **Predatory Journals:** Publications that accept research papers for payment (session noted \$2,400-\$3,500 per page) rather than scientific merit, providing false legitimacy to questionable research

² **Parasocial Media:** One-directional relationships where audiences develop personal feelings toward media figures who cannot reciprocate, enabling rapid spread of unverified claims through emotional rather than factual connections

³ **ANI (Artificial Narrow Intelligence):** All currently existing AI systems, which excel at specific tasks through statistical pattern recognition but lack general reasoning capabilities

⁴ **AGI (Artificial General Intelligence):** Theoretical future AI matching human cognitive flexibility across all domains - currently non-existent despite marketing claims suggesting otherwise

⁵ **Hallucination Tolerance:** Willingness to accept AI system errors in consequential applications, raising ethical questions about appropriate accuracy standards for decisions affecting human lives and rights

LCARS

- The GAI tool used was: *Whisper* through *Akio* app; *Minstral*.
- Lectures are recorded, transcribed locally with *Whisper (Aiko)* and then outlined and glossed locally by *Mistral* for archival after review and expansion by the professor.